LENGTH FREQUENCY LOG

Length frequencies involve area-specific collection of lengths for a particular species. They are used in determining the composition of the catch for calculating length-weight relationships. When combined with the collection of age structures, they also aid in the determination of the age composition of the catch.

Complete this log on a per haul basis for the biological sampling of specified finfish, squid, and sea scallops (see notes below). Length frequencies and shell height frequencies should be collected in the priority order listed in Tables 1a-h Length Frequency and Age Structure Sampling Priorities in the NEFSC Observer Program Biological Sampling Manual.

Lengths and heights, and any corresponding age structures must be collected from the same trip, haul, dredge, net (scallop, clam or quahog trips), and fish disposition. Sometimes, samples must also be separated by sex. While one log may be used for multiple species, if fish dispositions or sexes sampled from one haul differ, then separate columns on the log must be used for each of these catch segments. Samples from mixed segments of the catch are not usable.

NOTES: Sea scallop and clam/quahog heights are recorded in the right-hand section of this log.
Pelagic species sampling is recorded on the Individual Animal Log, unless otherwise instructed.
Crustacean sampling (i.e. lobster and crab sampling) is recorded on the Crustacean Sample Log.
Marine mammal and sea turtle sampling is recorded on the Marine Mammal Biological Sample Log or the Sea Turtle Biological Sample Log, respectively.

INSTRUCTIONS

For instructions on completing the Header fields A, B, C and E, refer to the Common Haul Log Data section of the manual.

1. DREDGE/NET POSITION: (for scallop trips only) Record the position of the dredge or net (port, starboard, both, or aft) in which the *animals* being

sampled were caught by placing an 'x' next to the appropriate position.

NOTE: Sea scallops sampled must only be from one dredge/net, not both. However, fish sampled on a scallop trip should be from mixed dredges/nets.

NOTE: If there is length data for catch from different dredge/net positions, fill out a separate log for each position.

NOTE: For scallops fill out a separate log for each fish disposition code.

NOTE: Aft refers to a single net fished over the stern of the vessel.

For example: During a haul, if you were to sample cod from both the port and starboard dredges/nets and scallops from the port dredge/net only, the length data would need to be filled out on 2 seperate Length Frequency Logs with an 'x' placed next to the appropriate dredge/net position.

2. SPECIES NAME: Record the complete common name of the animals being sampled, as listed in Appendix A. Species Names. This name must agree with the species name recorded on the corresponding Haul Log.

NOTE: If this species requires multiple columns for length measurements, be sure to rewrite the same species name in each column needed, and carry the rest of the column header information over to the other column(s) with arrows.

Example:

SPECIES NAME	ATL.COD	ATL.COD
SPECIES CODE		
FISH DISPOSITION CODE	100 —	— — ⟶
SEX CODE	0 —	— — ⟶
SAMPLE WEIGHT (R/A)	450 —	— — ⟶
SAMPLE TYPE CODE	2 —	— — ⟶
# SAMPLES	20 —	— — ⟶

3. SPECIES CODE: Leave this field blank.

4. FISH DISPOSITION CODE: Indicate the disposition of each species listed in SPECIES NAME (#2) by recording the most appropriate three digit code listed in Appendix B. Fish Disposition Codes. The code must agree with the code recorded for this species on the corresponding Haul Log.

5. SEX CODE: Indicate the sex of the animals being sampled by recording the appropriate one digit code:
- 0 = Unknown.
- 1 = Male.
- 2 = Female.
- **NOTE:** It may be necessary to sample a species by sex. See Table 2. Fish and Shellfish Sampling Requirements by Species for all Domestic Fisheries in the NEFSC Observer Program Biological Sampling Manual. For samples which are sexed, each sex must be recorded in a separate column.

6. SAMPLE WEIGHT: Record, in whole pounds (or to the nearest tenth of a pound, if necessary), the actual weight of all of the animals measured for the species being sampled. **All finfish should be recorded as ROUND ACTUAL weights. All shellfish should be recorded as DRESSED ACTUAL weights.**
- **NOTE:** For scallop trips, record the dressed weight from the 100 scallops measured and used to obtain a volumetric measurement. If no volumetric measurement is obtained during a haul, dash this field.
- **NOTE:** On foreign vessels, record weights in whole kilograms (kgs).
- **NOTE:** If a sample from the same catch disposition is sampled by sex, be sure to record the appropriate sample weight for each sex.

7. SAMPLE TYPE CODE: Indicate the type of age structure collected from this sample of measured animals by recording the appropriate one digit code:
- 0 = None.
- 1 = Scales.
- 2 = Otoliths.
- 3 = Shells (no longer collected in the scallop fishery).

- 4 = Whole.
- 5 = Vertebra.
- 6 = Dorsal Spines.
- 7 = Scales and Otoliths (for each animal).
- 8 = Head.
- 9 = Other, record the age structure in COMMENTS.
- **NOTE:** See Table 2. Fish and Shellfish Sampling Requirements by Species for all Domestic Fisheries in the NEFSC Observer Program Biological Sampling Manual for the proper age structure to collect for each species.

8. NUMBER OF SAMPLES: Record the total number of animals from which age structure samples were collected from this sample of measured animals.
- Example: One pair of otoliths or one envelope of scales is one age structure sample.

9. LENGTHS: Precede the 0's (zero's) in each interval with the appropriate digit(s) to indicate the centimeter or millimeter range being used for this sample.
- **NOTE:** Finfish and squid are measured in whole **centimeters**. Shellfish (if sampled on this log) are measured in whole **millimeters**.

10. NUMBERS-AT-LENGTH: Record the **total** number of animals measured at each centimeter or millimeter. Do not stroke tally in this field.
- Example:

SPECIES NAME	REDFISH		REDFISH	
SPECIES CODE				
FISH DISPOSITION CODE	001		001	
SEX CODE	2		1	
SAMPLE WEIGHT (R/A)	100		85	
SAMPLE TYPE CODE	2		2	
# SAMPLES	10		10	
MEASUREMENTS: FINFISH, SQUID - cm SHELLFISH - mm SEX CODES: 0 = UNKNOWN	20 1 2 3 [1] 4 [2]	0 1 2 3 4	20 [1] 1 2 [3] 3 4	0 1 2 3 4

SEA SCALLOP SAMPLING

11. VOLUMETRIC MEASURE OF SCALLOP MEATS: After the **first haul of each observed**

meats, to the nearest 50 milliliters, of all of the animals measured from this random sample of at least 100 kept scallops. See the Scallop Fishery Sampling Priorities in the NEFSC Observer Program Biological Sampling Manual for further instructions on how to collect this measurement.

12. NUMBERS-AT-HEIGHT: Record the **total** number of sea scallops, clams or quahogs measured at each height interval. Do not stroke tally in this field.

COMMENTS

Record information regarding fish, scallops, clams or quahogs sampled on this haul. If more room is needed, use the back of this log, making sure to write "See Back" on the front of the log. Reference each comment with its corresponding field name.

> **NOTE**: If a complete sample can not be obtained, record the reason(s) in this section.